Please amend the claims as follows:

1. (Amended) A reflectance sensor, ~~built up from~~ comprising

a) an optical unit (A) which comprises

aa) a light source (Aa) ~~in the form of~~ comprising a lamp, and

ab) a fiber-optic system comprising optical waveguides (Ab), at least one optical waveguide being a reference waveguide,

b) a sample analysis unit (B), ~~which comprises~~comprising

ba) a measuring window (Ba), and

bb) a sample analysis cell (Bb),

the optical unit being arranged on one side of the measuring window and the sample analysis cell being arranged on the other side of the measuring window, by said analysis cell being pressed against the measuring window in such a way that, between said measuring window and ~~sample analysis~~ said analysis cell, a gap is formed which must be traversed by a sample to be measured in the form of a liquid pigment preparation, the sample being sheared considerably as it traverses the gap,

and

c) a system control unit (C) comprising detectors (Ca) for recording measured data and an evaluation device (Cb) connected thereto,

at least one optical waveguide connection being led from the light source (Aa) to the measuring window (Ba) and from the measuring window (Ba) onward to the detector (Ca), to generate a measured signal (reflectance of product), and at least one reference waveguide connection ~~being led~~ leading directly from the light source (Aa) to the detector (Ca) or from the

measuring window (Ba) to the detector (Ca) to produce a reference signal, wherein the analysis cell is removable.

2. (Canceled)

3.(Amended) The reflectance sensor as claimed in claim 1 ~~or 2, characterized in that~~ wherein the lamp is ~~chosen from the group comprising~~selected from the group consisting of LEDs, gas discharge lamps and lamps with incandescent filaments.

4. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 3~~claim 1, ~~characterized in that~~ wherein the lamp has an integrated shutter.

5. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 4, characterized in that~~claim 1, wherein the optical waveguides are fibers of at least one of 100, 200, 400, 600 ~~or~~ and 800 µm fiber diameter.

6. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 5, characterized in that~~ claim 1, wherein the fiber used as a reference waveguide has a diameter which is one of matched to~~,~~ and ~~preferably~~ smaller than, the remaining optical waveguides.

7. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 6, characterized in that it~~claim 1, further comprsing ~~additionally has~~ at least one of the following features:

ac) a compensation filter arranged behind the lamp, ~~is a compensation filter~~, ~~which~~ that linearizes the spectrum from the lamp such that the difference between the highest and lowest intensity of the light emitted by the lamp is ~~as small as possible, for example~~ at most a factor 4,

ad) an IR blocking filter, a condenser and a scattering disk ~~are~~ arranged behind the lamp [[-]] or between lamp and compensation filter if a compensation filter is used,

ae) the optical waveguides are led in protective tubes and supported over their entire length by means of a supporting frame,

af) the reference waveguide is led via a precise spacing element with incorporated scattering disk, and attenuated in a defined manner.

8. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 7~~ claim 1, ~~characterized in that~~ wherein the measuring window is a plane plate, ~~preferably a~~selected from the group consisting of ~~plane plate of~~ glass, semi-precious stones ~~or~~ and diamond, ~~particularly preferably~~ and is 1 to 12 mm thick and 10 to 80 mm in diameter.

9. (Amended) The reflectance sensor as claimed in ~~one of claims 1 or 3 to 8~~claim 1, ~~characterized in that~~ wherein the gap is 2 to 15 mm long, 2 to 40 mm wide and between 0.05 and 5 mm high, the exact height ~~preferably~~ being variably adjustable.

10. (Amended) The reflectance sensor as claimed in ~~one of claims 1 or 3 to 9~~ claim 1, ~~characterized in that the considerable~~ wherein the shearing of the sample is achieved by a pressure drop in the gap from the entry point of the sample into the gap as far as its exit point of 0.1 to 3 bar over 1 to 15 mm length~~, preferably 0.5 to 1 bar over 1 to 5 mm length.~~.

11. (Canceled0

12. (Canceled)

13. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 12~~claim 1, ~~characterized in that~~ wherein the system control unit has detectors in the form of fiber-optic monolithic diode-line sensors which permit a resolution of at least 15 bits.

14. (Amended) The reflectance sensor as claimed in ~~one of claims 1 to 13~~claim 1, ~~characterized in that~~ wherein all the units of the reflectance sensor are accommodated in a common housing, in which ventilation and thermostat-controlled heat dissipation are carried out.

15. (Amended) A method of measuring the reflectance of a sample in the form of a liquid pigment preparation, with a reflectance sensor as claimed in claim 1, comprising:

i) forming a sample stream with a defined thickness,

ii) irradiating the sample stream with electromagnetic radiation emitted by a light source, the electromagnetic radiation interacting with the sample and some of the radiation being reflected diffusely following interaction with the sample,

iii) receiving and registering the diffusely reflected radiation as a reflectance signal,

iv) receiving and registering a reference signal, the reference signal being electromagnetic radiation emitted by the same light source which serves to irradiate the sample stream but which does not interact with the sample,

the reflectance signal and the reference signal being registered simultaneously.

16. (Canceled)

17. (Amended) The ~~use of a reflectance sensor as claimed in one of claims 1, 3 to 11, 13 or 14~~ method of claim 15 ~~for measuring~~wherein the reflectance of liquid pigment preparations is

measured in ~~any~~ a ~~desired~~ process stage in the production, further processing ~~and the~~ or use of liquid pigment preparations, ~~preferably for~~wherein said process stage is at least one of quality control during the dispersion of pigmented coatings and pigment pastes, ~~for~~ quality assessment during coating production, ~~for~~ controlling a metering system during the formulation of coatings by mixing various liquids, ~~for~~ automatically ~~controlled~~controlling color adjustment by means of tinting during coating production, ~~for~~ matching the color of the coating in a coating system which has a metering system for colored pastes and~~/or for~~ monitoring subsequent color changes as a result of ageing or shear stressing of pigmented coatings or pigment pastes.

18. (Canceled)

19. (Canceled)